



*The Public Sector “Union”  
Effect: Pushing Up Unfunded  
Pension Liabilities and State  
Debt*

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## Executive Summary

The Great Recession of 2008 left state and local governments exposed to structural deficiencies that threaten their ability to deliver basic public services. During more opulent times, state and local governments were more accommodating to political pressure by public sector unions for generous compensation packages. At the ballot box, the ability of public sector unions “to choose their bosses” translated into increases that would not meet the test of the market. But political officials also know that taxpayers, wary of more tax increases, are also their bosses. State and local governments took the easy path of not raising taxes. Because politicians want the best of both worlds, they are quick to borrow for the promises they cannot keep. The presence of public sector unions, more attuned to the details of public finance than rationally ignorant taxpayers, increases the obligations of state and local governments. A substantial swath of the academic literature demonstrates this close link between the presence of unions in the public sector and greater benefits, especially pensions and retiree benefits.

This paper will argue that the presence of public sector unions in a state leads to greater state profligacy. First, we find that every percentage point increase in the unionization of public sector employees is associated with an additional \$78 of state and local government debt *per capita*. Informed citizens are well aware of the potential for public debts to impede the ability of governments to provide basic services, but promises to pay future benefits to public sector employees today may lead to identical issues. These promises, the most important of which are pension plans and retiree health benefits, are known as *unfunded liabilities*. In essence, state and local governments have committed to providing these benefits in the future, but any reasonable calculation shows that governments today are not putting enough money aside to keep their promises without severely burdening future generations. We show that, for each percentage point of the public sector workforce represented by unions, states are about one percent more likely to be rated as “very poorly managing their future liabilities” by the Pew

Center on the States.<sup>1</sup> States which are able to put limits on the power of public sector unions will likely see better managed state finances and more realistic plans for meeting current and future obligations to public sector employees. The failure to address this issue will only lead to an enormous spike in tax rates or deep cuts in basic social services. The arithmetic does not lie.

## Introduction

With all the talk about how to pay future entitlements such as Social Security and Medicare with future tax revenues, it is easy to forget an identical problem will be faced by states and local governments whose employees participate in a different system. Unfunded liabilities for the health benefits and pensions of current state and local public sector employees are the real elephant in the room no one wants to face.<sup>2</sup> According to The Pew Center on the States, Massachusetts rates as having “serious concerns” with its employee pensions and “needs improvements” in its retiree health care. This corresponds with a 71 percent funded liability of nearly \$64 billion for its pensions and 2 percent of its \$16.5 billion liability for its retiree health care.<sup>3</sup> Rectifying the problem will require prohibitively high tax rates, drastic cuts in public services, and/or cutting fringe benefits for public sector employees. In order to avert catastrophic measures, fringe benefits for at least *future* public sector employees must be on the table. The collective bargaining paradigm which contributed to this problem must be reformed. Reforms already underway range from the comprehensive reforms undertaken by Wisconsin in 2010 to the milder reforms undertaken by Massachusetts in 2011.

The ability of strong public sector unions to bargain and retain high fringe benefits for workers is a prime example of what is known as the principal-agent problem. The typical example of

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<sup>1</sup> The Pew Center on the States, *The Widening Gap Update*, June 2012, [http://www.pewstates.org/uploadedFiles/PCS\\_Assets/2012/Pew\\_Pensions\\_Update.pdf](http://www.pewstates.org/uploadedFiles/PCS_Assets/2012/Pew_Pensions_Update.pdf) (accessed December 23rd, 2012).

<sup>2</sup> Robert Novy-Max and Joshua D. Rauh, “Public Pension Promises: How Big Are They And What Are They Worth?” *Journal of Finance* 66, No. 4 (2011): 1207-45.

<sup>3</sup> *ibid.*

the principal-agent problem involves a company's shareholders unable to monitor and punish executives who fail to act in the best interests of the firm. The principal-agent problem is worse in the public sphere. The taxpayer, who does not have the time or tools to fully comprehend the long-term fiscal picture of the government, focuses instead on their own individual tax bills. As a result, politicians negotiating with unions will make promises to pay in the future instead of raising taxes today. Politicians who rely upon public sector union members as a core constituency look forward only to the next election. What we observe in the real world matches with what we would expect to observe given the principal-agent problem. Public employees such as teachers were paid what appeared to be at the time reasonable salaries but the real cost is incurred by future generations in the form of early retirement age, generous pension and retiree health benefits.<sup>4</sup> State and local governments are now beginning to feel the effects of not matching current payment for services currently rendered.

### *Recent Literature on the Effect of Public Sector Unions*

In response to the recent changes made by Wisconsin, proponents of strong collective bargaining rights and compensation argue that public sector workers pay should match those found in the private sector. The debate over whether public sector workers are overpaid compared to private ones is becoming more polarized. Jeffrey H. Keefe at Economic Policy Institute argued that public sector employees in Wisconsin are not over-compensated relative to private sector employees once education and other factors had been taken in to account; in fact, they are undercompensated by about 4.8 percent.<sup>5</sup> However, this is disputed by three other recent studies asking similar questions. An article at the elite academic publication *Journal of Economic Perspectives* by Maury Gittleman and Brooks Pierce concludes state

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<sup>4</sup>Although in individual cases they did not exactly match the public sector, since seniority is emphasized so much by unions.

<sup>5</sup> Jeffrey Keefe, "Are Wisconsin Public Employees Over-Compensated?" *EPI Briefing Paper #290* (Washington, DC: Economic Policy Institute, February 10<sup>th</sup>, 2011), [http://www.epi.org/publication/are\\_wisconsin\\_public\\_employees\\_over-compensated/](http://www.epi.org/publication/are_wisconsin_public_employees_over-compensated/) (accessed December 23<sup>rd</sup>, 2012).

employees are compensated by 3.2 percent to 3.7 percent more than private sector employees depending on which data source is used, and local employees are compensated 10.5 percent to 12.9 percent more than their private sector colleagues.<sup>6</sup> Bewerunge and Rosen in a recent paper find that, though they cannot consistently establish higher wages for state and local government employees, all public sector employees have much more pension fund wealth after controlling for relevant variables. Local government employees have \$54,912 more in pension wealth, state employees have \$46,742 more in pension wealth and federal employees have \$96,738 more in pension wealth.<sup>7</sup> Finally, the Congressional Budget Office, when looking at the wage premiums of federal employees, finds that compensation increases for all except the highest educational bracket.<sup>8</sup> Table 1 summarized the studies' results.

**Table 1: Summary of Recent Studies on Public Sector Compensation**

Study	Dataset	Level of Government (% increase)		
		Local	State	Federal
Keefe	Wisconsin		-4.8	Na
Gittleman & Price	U.S.	10.5 – 12.7	3.2 – 3.7	Na
CBO	High school or less	Na	Na	36
	Bachelor degree	Na	Na	15
	Professional or doctorate	Na	Na	18
Bewerunge & Rosen	U.S. Pensions	+\$54,912	+\$46,742	+\$96,738

What accounts for the public premium? The premium that comes from working for the government could be present whether or not the union is involved. Complete data is difficult to access for determining the effect for individuals who are both unionized and public sector, as opposed to finding data on just union versus non-union, or data on just private sector versus public sector. The method that would give the clearest picture would look at the effect on states following a change in their rules for unions; but that has transpired only a handful of

<sup>6</sup> Maury Gittleman and Brooks Pierce, "Compensation for State and Local Government Workers," *Journal of Economic Perspectives* 26, No. 1 (2011): 217-242.

<sup>7</sup> Phillip Bewerunge and Harvey S. Rosen, "Wages, Pensions, and Public-Private Sector Compensation Differentials," Griswold Center for Economic Policy Studies Working Paper No. 227 (June 2012), <http://www.princeton.edu/ceps/workingpapers/227rosen.pdf> (accessed May 15th, 2013).

<sup>8</sup> Congressional Budget Office, "Comparing the Compensation of Federal and Private-Sector Employees," posted January 30<sup>th</sup>, 2012, <http://www.cbo.gov/publication/42921> (accessed December 23rd 2012).

times in the modern era, making rigorous statistical estimation using that perspective impossible.

Attempts at measuring the effect of public sector unions have a long history in labor economics.<sup>9</sup> An out-of-print volume from the National Bureau of Economic Research (now freely available online) investigated this and similar questions with data availability arose.<sup>10</sup> The most pertinent chapter concludes,

“The principal theme emerging from the empirical evidence of this study is that municipal unions successfully employ a mix of strategies that rely on collective bargaining and political lobbying activity. Ultimately, this mix of strategies increases relative employment and compensation in the bargaining unit.<sup>11</sup>”

Stylized facts from this vein of research have been formalized.<sup>12</sup> Eileen Norcross of the Mercatus Center at George Mason University has since reviewed the literature, detailing both the NBER studies and more recent research on the topic.<sup>13</sup>

It is equally difficult to compile the data necessary for performing similar analyses for today’s world. Chris Edwards provides both public and unpublished information which paints the picture of the public/private and union/non-union distinction, although not in a way that

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<sup>9</sup> An extensive literature review was already published in 1986. See Richard B. Freeman, “Unionism Comes to the Public Sector,” *Journal of Economic Literature* 24, No. 1 (March 1986): 41-86.

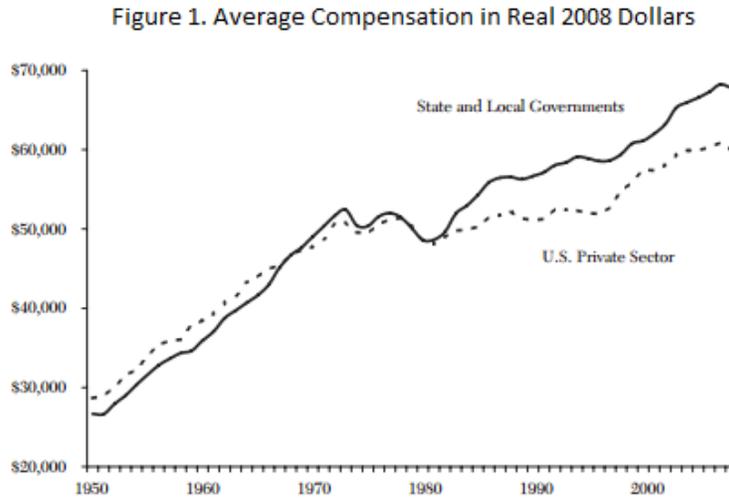
<sup>10</sup> Richard B. Freeman and Casey Ichniowski, eds, *When Public Sector Workers Unionize* (Chicago: University of Chicago Press, 1988), <http://www.nber.org/books/free88-1> (accessed December 23rd, 2012).

<sup>11</sup> Jeffrey Zax and Casey Ichniowski, “The Effects of Public Sector Unionism on Pay, Employment, Department Budgets, and Municipal Expenditures,” ch. 12 of , *When Public Sector Workers Unionize*, Richard B. Freeman and Casey Ichniowski, eds. (Chicago: University of Chicago Press, 1988).

<sup>12</sup> Linda C. Babcock, John Engberg, and Amihai Glazer, “Wages and Employment in Public-Sector Unions,” *Economic Inquiry* 35 (July 1997): 532-43.

<sup>13</sup> Eileen Norcross, “Public-Sector Unionism: A Review,” Mercatus Center Working Paper No. 11-26, May 18<sup>th</sup>, 2011, <http://mercatus.org/publication/public-sector-unionism-review> (accessed December 23rd, 2012).

allows for wholly robust statistical analysis.<sup>14</sup> He first shows that public sector employees' total compensation was not always greater than the private sector, but a wedge appeared around 1980. Figure 1 displays his results.



NOTE: This is Figure 1 in Edwards (2009)

Moreover, Edwards provides unpublished data on the ratio between State and Local Nonunion versus State and Local Union compensation per hour. Table 2 displays the outcomes.

**Table 2: Public Sector Compensation: Union vs. Nonunion (2009 \$ per hour worked)**

Compensation Item	State and local nonunion (a)	State and local union (b)	Union premium ratio ( b/a)
Total compensation	33.33	47.46	1.42
Wages and salaries	22.86	29.90	1.31
Total benefits	10.47	17.57	1.68
Paid leave	2.63	4.06	1.54
Supplemental pay	0.26	0.45	1.73
Health insurance	3.07	5.91	1.93
Other Insurance	0.12	.22	1.83
Defined benefit retirement plan	1.94	3.98	2.05
Defined contribution retirement plan	0.36	0.25	0.69
Legally required*	2.09	2.70	1.29

NOTE: This is Table 2 from Edwards (2009), \* Edwards does not provide specifics in his paper.

<sup>14</sup> Chris Edwards, "Public Sector Unions and the Rising Costs of Employee Compensation," *Cato Journal* 30, No. 1 (2010): 87-115.

State and local union employees receive a compensation premium ratio over nonunion employees that range from 1.29 for legally required benefits to 2.05 for defined benefit retirement plans. The only compensation category which nonunion employees hold a premium over union employees is defined contribution retirement plans. These plans are generally an anathema to organized labor, since they put the burden of risk on the employee and not the state or taxpayer, and only account for a small share of public employees. In all other categories, the public sector unions have been able to carve out substantially higher levels of compensation.

Unless there is a full panel of data – meaning many years of data for all fifty states – this data alone doesn't "prove" that public sector unions are putting pressure on state budgets, but it becomes increasingly difficult to imagine confounding variables which would explain these differences. If, as previous studies claim, the differences go away if you control for education, why are the differences so stark for union versus nonunion? Unions are supposed to be helping workers with little bargaining power, workers who would presumably have little education. But all of this analysis tells a different story. If there are confounding variables, they would be telling the *opposite* story of the way unions market themselves; unions would be systematically representing those who are more highly skilled, and thus do not need the protection of collective bargaining. It stands to reason that public sector unions are increasing their members' compensation. Otherwise, they wouldn't exist.

Complete data may not tell the whole story since rules governing unions have changed only a handful of times. Nonetheless, the studies that look at total compensation do tell a consistent story that public sector unions are able to extract much higher levels of compensation than are typical in the private sector. Given the nature of the principal-agent problem, this should not be surprising. Moreover, these elevated levels of compensation associated with higher levels

unionization have implications for states' future budgets that will manifest in unfunded pension liabilities and debt burden.

## **Unfunded Liabilities**

Public sector unions could exert negative effects on state and local government finances through unfunded liabilities. As noted above, public sector unions extract generous public pensions and retirement benefits that can include higher payouts, generous health coverage with small or no copayments and lower retirement ages. Lawmakers eagerly grant these benefits to satisfy an important constituent today while pushing the cost out into the future. However, the future is fast approaching: as with Social Security, baby boomers have begun to reach retirement age and state pension and healthcare funds are beginning to show the strain.

For some, the future is now. In the fiscal year 2012-13 budget, Los Angeles expects to spend nearly 32 cents on pension benefits for every dollar of total payroll. This compares to Los Angeles employees paying only 9 cents for every dollar of payroll.<sup>15</sup>

The Pew Center on the States evaluates the efficacy of states in managing both their future pension and retiree health care obligations.<sup>16</sup> For each, Pew rates the state as (1) "Solid Performer," (2) "Needs Improvement," or (3) "Serious Concerns." Wisconsin is the only state that is managing both effectively and rates as a "solid performer" for both. Twelve states, however, have "serious concerns" in both areas – Arkansas, California, Connecticut, Hawaii, Illinois, Louisiana, Mississippi, Montana, New Hampshire, New Jersey, New Mexico, and Rhode Island.

However, is this a case of some states simply managing their finances better than others, or enjoy better economic conditions such as North Dakota's shale oil boom? Or does the presence

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<sup>15</sup> Adam Tatum, "Case Study: Los Angeles's Pension Slide, 2003-2013," Los Atos, CA: California Common Sense, February 28<sup>th</sup>, 2013, <http://cacs.org/images/dynamic/articleAttachments/26.pdf> (accessed May 7th, 2013).

<sup>16</sup> Ibid.

of highly unionized public sector workers place a higher burden on state employee pension and retiree healthcare funds than states with lower levels of unionization?

We attempt to formalize this hypothesis econometrically by using regression analysis. We use the Pew ratings as our database by assigning a value of “0” to each score of “Serious Concerns,” a value of “1” to “Needs Improvement,” and “2” to “Solid Performer.” A total index of unfunded liabilities is the sum of the scores for pensions and retiree health care. For instance, Wisconsin scores as a “Solid Performer” for both, with a numerical value of 2 for each, and a total rating of 4. Massachusetts, which has “Serious Concerns” for pensions and “Needs Improvement” for retiree health care, has a total rating of 1. However, note that in constructing this variable, Nebraska and Oklahoma were dropped as Pew did not rate their retiree health care. We do not believe this would bias our regression result.

The dependent variable is this index of unfunded liabilities. The econometric model would seek to explain the variability in the index with the percentage of public sector employees who were members of a union in 2012 and a series of control variables.<sup>17</sup> For this purpose we employ ordered logistic regression (OLR).<sup>18</sup>

We accounted for several control variables when conducting this analysis. A state’s standard of living, population, population density and education could all plausibly have some effect on a state’s record with unfunded liabilities, and it is important to control for these factors before reaching any conclusions. Standard of living, captured by Gross State Product Per Capita, allows governments to better address unfunded liabilities while burdening its population less. A higher population may allow states to cover the costs of future liabilities if there are increasing returns to scale. A dense population base found in cities as opposed to populations spread widely across a state may allow future liabilities to be managed more effectively. A

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<sup>17</sup> Data from <http://www.unionstats.com/>.

<sup>18</sup> See Scott Menard, *Applied Logistic Regression Analysis*, Second Edition (Thousand Oaks, CA: SAGE Publications, Inc., 2001).

better educated citizenry may be more cognizant of the importance of properly funding future liabilities.

Finally, there may still be omitted variables from the regression leading to a misleading result. To address this, we include Gross State Product Per Capita (GSP/cap) in the first year it was compiled (1963) to indirectly account for other systematic differences between states. For instance, the geography of the state or the presence of natural resources is presumably at least in part captured in this variable.

Upon testing, the only statistically significant variables among these are Gross State Product Per Capita and the proportion of unionized public sector employees. After controlling for these two variables, none of the others exhibited significance, while the proportion of unionized public sector employees always remained statistically significant.<sup>19</sup> Table 3 reports the regression results.

**Table 3: Unfunded Liabilities Regression Results**

Controls	Public Sector Union Coefficient	P-Value
GSP/cap	-0.043	0.012
GSP/cap, % with bachelor's	-0.040	0.025
GSP/cap, population density	-0.032	0.076
GSP/cap, GSP/cap in 1963	-0.041	0.027
GSP/cap, population	-0.044	0.011

The public sector union coefficient is negative and statistically significant at the 10 percent level for all five model specifications. For four of the five models the coefficient is significant at the 5 percent level. In addition, the public sector union coefficient is quite stable across all five models, which gives us confidence in the coefficient.

<sup>19</sup> It was not significant when all variables were included at once, but under those circumstances all variables except gross state product per capita were insignificant. Controlling for all variables at once is likely just introducing noise into a model with a limited sample size.

These results are less intuitive for the lay reader than standard linear regression analysis. The ordered logistic regression calculates the increased or decreased likelihood of receiving each numerical rating from Pew as a result a one percentage point increase in union membership. It is best to simply provide the results before explaining further. Table 4 illustrates the relationship.

**Table 4: Interpretation of the Model Results of Unfunded Liabilities**

A One Percentage Point Increase in Public Sector Union Membership Increases the Likelihood of Receiving Rating After Controlling For...					
Pew Rating Index	GSP/cap	GSP/cap, % with bachelor's	GSP/cap, population density	GSP/cap, GSP/cap in 1963	GSP/cap, population
0	0.75%	0.69%	0.55%	0.71%	0.76%
1	0.29%	0.27%	0.22%	0.27%	0.30%
2	-0.65%	-0.61%	-0.50%	-0.61%	-0.66%
3	-0.32%	-0.30%	-0.23%	-0.30%	-0.33%
4	-0.07%	-0.06%	-0.05%	-0.06%	-0.07%

The column labeled GSP/cap provides the values for the baseline model. The value of 0.75 percent means that for each one percentage point of public sector union membership, it increases the likelihood of getting the worst pair of ratings from Pew by 0.75 percent. The size of these estimates is consistent, though the effect is weaker for index ratings of three and four.<sup>20</sup> That may seem small at first glance, but the value of public sector union membership ranges from 8.8 percent in North Carolina to 71.1 percent in New York. Massachusetts, with its unionization rate of 59.8 percent, increases the likelihood of receiving a score of 0 or 1 from Pew by 62.2 percent, in comparison to what would be the case if it had no unions at all. While we should be careful in applying these results to large changes, states do vary a great deal in the degrees to which their public sector employees are unionized. A reasonable summary of

<sup>20</sup> It should also be noted that, though the effect of unionization on receiving a Pew Rating of three or four is small, this is the result of *very* small samples. There is only one state that received a rating of four and five that received a rating of three.

these results is that for each percentage point of public sector employees are unionized, states are one percent more likely to receive very poor ratings (zero or one in this index) from Pew.

It is very difficult to econometrically test the relationship between public sector unions and fiduciary irresponsibility of future state liabilities, but the causal relationship is clearly present in the data. The presence of strong public sector unions leads state governments to make promises they cannot keep.

## **State Debt**

In addition to encouraging unfunded liabilities, unions could affect state and local financing. Instead of funding their demands out of revenues today by raising taxes, politicians feed unions with borrowed money, that is, future tax dollars. This leads to a situation where budgets bear little relationship with fiscal realities, granting that good state and local governance may sometimes require borrowing. Public sector unions lead governments to do the equivalent of borrowing against your home to go on a flashy vacation, not the equivalent of borrowing to make a sound investment.

The source of our data on the level of state and local government indebtedness is the Census Bureau's State and Local Government Finances.<sup>21</sup> We divide this by state population to obtain debt per person. We look at state and local debt as a sum, as opposed to each on their own, because states are inconsistent with respect to how they share their debt with local governments. Failure to do this only leads the data to be noisier.

In our final regression model, we include Gross State Product Per Capita and population as control variables, as both are statistically significant. In another regression model, where we include controls for population density, gross state product per capita in 1963, and education (defined as percent of population with a bachelor's degree) gives qualitatively very similar

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<sup>21</sup> U.S. Census, State and Local Government Finances, <http://www.census.gov/govs/local/>.

results.<sup>22</sup> This set of control variables was chosen for identical reasons provided in the previous section. The results of our primary model follow in Table 5.

**Table 5: Regression Results of Unionization and State Debt**

Variable	Coefficient	p-value
Percentage of Public Sector Employees Unionized	78.13	0.000
GSP/cap	0.105	0.003
Population	0.00007	0.076
Constant	873.38	0.496

Each percentage point of public sector union membership leads to an additional \$78.13 of state and local-level debt per person.<sup>23</sup> For instance, 59.8 percent of public sector employees in Massachusetts are unionized. So, the strength of unions in Massachusetts leads to an additional \$4,672.17 of state and local debt per person. Massachusetts has a population of 6,587,489, meaning this corresponds to about \$31 billion in debt, which is 31.6 percent of Massachusetts's debt.

Massachusetts has very high debt in comparison to the other states, but the effect of unions as a percentage of this debt is actually in the middle-of-the-pack.<sup>24</sup> The states where the highest percentage of debt is attributable to public sector unions are Iowa at 55.2 percent, Montana at 54.3 percent, Michigan at 54.2 percent, Maine at 52.5 percent and Minnesota at 50.5 percent. States where unions are least pivotal in inflating state debt are Virginia at 10.3 percent, South Carolina at 11.8 percent, North Carolina at 12.8 percent, Kansas at 13.8 percent and New

<sup>22</sup> The coefficient on public sector unions in this alternative specification is 56.69 with a standard error of 18.98.

<sup>23</sup> This may sound enormous, but keep in mind that this debt ranges from about \$3900 per person in Idaho to about \$16,300 per person in New York.

<sup>24</sup> While public sector unions in Massachusetts are very strong, few states have recently experienced a boondoggle the size of The Big Dig. Meaning, Massachusetts is so indebted that we can only attribute so much of that debt to the presence of public sector unions.

Mexico at 14.8 percent. Overall, 31.8 percent of state and local debt is attributable to the presence of public sector unions.

The total amount of state and local government debt in 2010 was \$2.819 trillion. We attribute \$896 billion of this to public sector unions.

## **Conclusion**

The power of public sector unions leads to imprudent decisions in the public sector. States take on too much debt and make promises they cannot keep. As long as public unions keep their special bargaining privileges, the familiar story will unfold. Unions will lobby and fight for greater benefits, and politicians, given the choice between raising taxes and angering the union, choose none of the above. The bill for the payoff needed to secure the vote of the union is payable to future generations.

The cost of public sector unions can be seen in both unfunded liabilities and the debt that state and local governments have accrued. States are more likely to receive very poor scores in the management of their unfunded liabilities according to Pew if public sector unions are prevalent. The effect on unfunded liabilities may be very large if an excessively unionized state were to eliminate its unions altogether. Meanwhile, unions may be even more costly for the level of a state's debt. The magnitude of the cost calculated here, \$78.13 per person for each percentage point of public sector unions, constitutes an enormous percentage of the debt held by state and local governments. Enacting more institutional rules inhibiting the ability of public sector unions to manipulate and cajole is an essential reform for improving the quality of governance in America.

## About the Authors

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